Jean Trémolières: 1913–1976

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Jean Trémolières was one of the leading scientists who contributed to the development of nutrition sciences in France after the Second World War. His global approach of nutrition, including psychological and sociologic aspects, is still influential among French nutritionists and sociologists; in addition, most of the structures he created or developed, such as research team, journal, and scientific societies, are still active and continue to play important roles in nutrition sciences and policies in France.

Jean Trémolières was born 5 December 1913, in the 16th arrondissement of Paris where his father, Maurice Raoul Trémolières (1884–1958), worked for the Bonnin Company as a purchaser of precious metals and later as head of a production unit. He spent his childhood between the apartment in the 7th arrondissement and the family farm in the Jura, in the east of France. His paternal grandfather, Raoul Trémolières, originated from this region where he was a professor of painting and local landscape painter. After completing his studies at the renowned Lycée Janson de Sailly, Trémolières studied medicine and at the same time a degree in science (which he obtained in 1948). He began his internship in 1937, only to interrupt it the next year because of military obligations. He was posted to work as a doctor with the first battalion of the 146th Fortress Infantry Regiment in Teting, Moselle from 1938 to 1 October 1939, then in Aire sur Moselle, and in 1940 to the military hospital in Fismes, which he left during the exodus in mid-May 1940. He married Claire Marie Renée Boutet de Monvel 30 December 1939, and they had 4 children. She was the maternal granddaughter of the industrialist who created the Public Works Establishment Lassailly et Bichebois.

The war years proved to be a turning point in Trémolières’s life, professionally and personally, radically changing the path of this young man with his bourgeois, Catholic upbringing. As a medical officer, he encountered the working class in the infirmary and to an even greater extent in the youth club, which was run by several activists from the Young Christian Workers ([YCW]), Jeunesse Ouvrière Chrétienne in French). This was the start of a close friendship with the Abbot Henri Godin, the YCW’s chaplain for the sick and soon to be a founding member of the Mission de Paris and the worker-priests’ movement. Trémolières would later say of Godin, “It is he who gave me self-confidence and taught me, if I can put it thus, the duty of revolution” (1). The two men met again as soon as they returned to Paris from the Front in 1941, working together to set up the Youth Team (équipe jeunesse) (1941–1942) after meeting the Women’s YCW from Vincennes and the Jocists, as they were known, of North Paris. Together they published a collection of pamphlets based on discussions between the young Jocists, Godin, and Trémolières.

During the 1940s, Trémolières wrote a series of books and articles under the pseudonym Docteur J Jouvenroux. In addition to the publications connected to his work with the YCW, others, which he wrote alone, reveal more clearly his reflections and principal disagreements as a bourgeois Christian with concepts of the church and the faith. From a Catholic family, parishioner of Sainte Clotilde, and a member of the Laennec Conference (a group of Catholic medical students), Trémolières no longer felt at home in the church of the 1940s.

His reservations about the Catholic hierarchy and its doctrine were also true of the academic world with which he was confronted as soon as he returned to medicine. The war had fractured his life as an intern. Returning to his internship, interrupted 4 years earlier, he was advised by the Welfare Services “since there were no vacancies, to take the place of whoever had been appointed after myself. In the first service I went to, I was treated as a bounder and a boor, in spite of my military uniform” (2). He joined the service of Jean-Noël Fiessinger, professor of clinical medicine at the Hôtel-Dieu, who was also to supervise the thesis that Trémolières presented in 1941 on cystic lithiasis jaundice. In 1943, he applied for a position with the Nutrition Section of the National Institute of Hygiene ([INH], which became the National Institute for Health and Medical Research [INSERM]), of which he became the director. Established 2 years earlier in Marseille with funding from the Rockefeller Foundation, the INH was run by André Chevallier, professor of physiology at Marseille Faculty of Medicine. In keeping with the INH’s epidemiologic orientation, Trémolières developed a series of surveys on the state of populations’ nutrition designed to assess the physiologic effects of rationing during the war and at the end of the worldwide conflict. Their originality in the French context of nutrition lay in the combination of measuring food consumption and biological and clinical tests on the subjects studied, because there were yet no surveys of this kind in France.

One of the impacts of Trémolières’s work on nutrition was to develop and to ensure the continued existence, after the war, of French nutrition surveys established for the needs of wartime. The surveys were gradually broadened to include more general questions about eating, from household appliances to social representations of foods. The person responsible for their
coordination was Yvonne Serville, a dietician and professor of home economics since her arrival in the service in 1951, and which she developed with Trémolières in partnership with social scientists in a sociology subsection. According to Serville, “he was interested in all aspects of nutrition, which he considered to be a cross-roads and a synthesis of many sciences” (3). Trémolières was paying as much attention to the content of the diet as to the social context of the food intakes. Because of this concern, he is considered the father of French modern dietary surveys and may partly explain why some French nutritionists are still likely to explore sociologic aspects of their field and why some sociologists working in the field of food consumption still refer to his work. In parallel to the epidemiologic surveys conducted with the INH, Trémolières continued to take an interest in clinical medicine. Since 1941, he had been working with Guy Laroche, who became professor of clinical medicine at the faculty of medicine in 1946, and together they studied polyneuritic disorders and hunger edema. Clinic director of the faculty of medicine in 1945, Trémolières was appointed assistant MD in the gastroenterology service at Bichat Hospital in 1946.

In 1951, the relation between epidemiologic and clinical research was strengthened under the supervision of Louis Bugnard, who had replaced Chevallier as director of the INH in 1946. With the aim of working more closely with hospitals, where little research was conducted at the time, Bugnard created the Human Nutrition Laboratory, the first French research center established within a hospital, and Trémolières was appointed director. The center’s goal was to study the biochemistry of human nutrition and dietetics. It became fully operational in 1956 when a new, 3-story building was opened in Bichat Hospital. It was equipped with laboratories, a library, offices, a canteen for the researchers (a key place for discussions), and, an innovative measure, a dozen hospital beds. A dietetics kitchen, the first of its kind, allowed diverse experiments to be conducted, including the introduction of dieticians in hospital research. This apparatus allowed him and his team to develop a diagnostic method that was based on the fecalogram analysis, a widely recognized innovation by this time (4), and therapeutic methods for the restoration of digestive fistulas. One of therapeutic methods consisted of using permanent local lactic acid irrigation (5). Between the INH’s Nutrition Service and Bichat’s Research Center, Trémolières’s research covered cellular biology, metabolism (of calories, fats, proteins, and ethanol), digestive physiology, and surveys on eating behaviors. At the same time, the hospitalization unit constituted a major and original center for research and treatment in partnership with Bichat Hospital’s clinical departments of surgery and gastroenterology.

In addition to his work at the INH, several expert assessments in the aftermath of the war fueled Trémolières’s thinking and the direction of his research into nutrition, particularly for rationing. From 1945 to 1947, he acted as delegate to the Combined Nutrition Committee in Germany, where he witnessed the harmful effects of deportees’ inadequate and too hasty re-feeding. At the end of the war, he participated as a consultant in the nutritional aspect of the General Survey of Crete, organized by the Rockefeller Foundation, to study the conditions of a well thought-out industrialization of a country with an economy viewed as traditional. In 1949, as a Fellow of the Foundation, he traveled to the United States to study the organization of dieticians’ training, inquire about metabolic studies, and meet with Professor Fuller Albright, an American specialist in this matter. Above all, however, the trip was an opportunity for him to take part in the statistical processing in Iowa of the General Survey of Crete, where he observed that American standards did not apply to the Cretans. From 1949, at the request of the FAO, he investigated the endemic problems of undernutrition in poor countries. With his considerable experience of Crete, he demonstrated that the standards devised for developing countries which were based on models from industrialized countries were not adapted to their needs.

In the aftermath of the war, the concepts of nutrition and rations with which Trémolières was confronted in the framework of the FAO and the General Survey of Crete caused him to question the basis of rational nutrition, which soon led to a series of criticisms widely circulated by him and his team. Although the premise of these questions was visible as early as 1944 in the Bulletin de l’INH, it was in the special edition of La santé de l’homme in 1949 on balanced diets and the special issue of Sciences et Vie on food in 1953, both written by Trémolières and his team, that they established their definitive position. Trémolières thus stated that, on the question of the correct quantity of food, “science cannot, at the moment, respond to you personally,” and that it “can only respond to the average individual” (6).

His participation in 3 ministerial cabinets for health and one for scientific research after the liberation did not give Trémolières satisfaction. According to him, he was “not a man to build institutions and make useful regulations” (2). During his time with the General Delegation to Scientific and Technical Research (DGRST), he failed to oppose the INH’s transformation into a large research institute. When it was created in 1961, the DGRST was provided with a Nutrition Committee, headed by Trémolières. From 1961 onward, the committee coordinated various studies on the nutritional value of proteins, the digestibility of amylaceous substances, the stabilizing of foods, and, in particular, the study of the physiopathology of dietary fats (led by Trémolières). Soon, Trémolières put forward the idea of integrating laboratories from the private sector. The progressive budget cuts for nutrition and the transfer of concerted nutrition measures from the DGRST to the INSERM were doubtlessly conducive to his gradually turning toward the agro-food industry (even though he had discussed this from the start of the committee’s existence), and the Conservatoire National des Arts et Métiers [National Conservatory of Arts and Crafts (CNAM)].

After the departure of the agricultural crop pathologist Jean Dufrenoy (1894–1972), the CNAM Agriculture and Production of Raw Materials (Agriculture et production des matières) chair was transformed into the chair of Biology for Agricultural and Industrial Applications (Biologie en vue des applications à l’agriculture et à l’industrie). Trémolières was elected to this position in 1964, thanks to his gift for public speaking and his teaching capacities, and it seemed that these merits alone distinguished him from his principal competitor, the biologist Jean Tavlitzki, then research associate at France’s National Center for Scientific Research (7). Trémolières inaugurated his professorship at the CNAM on 20 February 1965, with a lecture on “The Meaning of Biology in Today’s World” under the auspices of Louis Bugnard (1).

From 1965 to 1975, there was relatively little change to the structure of his teaching. It comprised a series of lectures on cells and molecular biology, followed by a second series on the biology of multicellular organisms and the metabolism of nutrients. He developed these lectures in the 4 volumes of his Biologie Générale, published by Dunod between 1966 and 1969. Over the years, Trémolières occasionally gave lectures on
eating behaviors, one of the main topics of the final volume of his *Biologie Générale*. However, although nutrition was a recurring theme, it was not sufficient to cover biology in its entirety, and it was essentially in the laboratory in addition to the chair that Trémolières developed this subject at the CNAM. The laboratory was used for nutritional research, involving, in particular, the toxicity of foods and the physiopathologic effects of fats. Most of this research was performed jointly with the agro-food industry.

His changing relationship with the INSERM prompted Trémolières to take a greater share of his work on nutrition to the CNAM. His professorship was reclassified in 1970; he was no longer paid by the INSERM and from then on received his salary from the CNAM, which became his principal position. The institution did, however, grant him the right to continue leading his unit as an honorary professor. Nevertheless, although, in Trémolières’s words, this voluntary work enabled him to supervise the research conducted by his unit, his position no longer allowed him officially to be appointed as head of research and therefore to sit on various teaching hospital proceedings such as the Bichat, Beaujon Professors’ Assembly, or Paris VII’s Human Biology Masters’ Committee. These administrative complications revealed a deeper discord at the time between Trémolières and the leadership of the INSERM. Indeed, his gradual eviction from the high spheres of the INSERM made it more difficult for him to control the claims made about nutrition there.

While retaining a role that was little more than symbolic at the INSERM, where he was more or less confined to his laboratory, Trémolières attempted to bring a larger share of his scientific work on nutrition to the CNAM. This led to the revival of the Scientific and Technical Institute for Food (*Institut Scientifique et Technique de l’Alimentation*), of which Trémolières was now head of research and teaching. Little by little, he transferred the research topics that he had been developing at the INSERM to the CNAM, while concentrating them on the relation between the agro-food industry and the health of the populations. In addition to the series of biology lectures at the CNAM, his lectures at the Scientific and Technical Institute for Food concerned the master’s degree in nutrition and the study and research diploma in human biology at Paris VII. Until Trémolières’s death, the programs varied but were based on 5 major themes, of which the agro-food industry was but one. The other themes were human nutrition (in particular physiology and an introduction to research, but also nutrition’s application to dietary therapy), nutrition and public health (with lectures on epidemiology), food and society (the economy and legislation), and finally, applied genetics. The Scientific and Technical Institute for Food and then the *Equipe de Recherche en Épidémiologie Nutritionnelle* (CNAM-INSERM) remains at the heart of nutritional epidemiology and health-nutrition policy today, with, among others, the implementation of the French Nutrition Health Policy (*Programme National Nutrition Santé*) which includes a 5-a-day campaign in addition to many other actions.

In addition to his research into nutrition, Trémolières also distinguished himself with the developments he brought to teaching and the professionalization of dietetics. In 1950, in addition to the *Carnet de l’économe*, he published a hospital diet manual for nurses and bursars wanting to specialize in dietetics. Although a center in Marseille had been giving lectures in dietetics since 1949 in liaison with welfare services (and Paris’s welfare services had been offering lectures in dietetics to bursars and nurses wanting to specialize in the subject since 1946), the first Parisian school of dietetics opened in 1952. To begin with, Trémolières gave a dozen hours of lectures there on the problems of institutional meals. This provided the framework for the *Manuel élémentaire d’alimentation humaine* that he wrote in collaboration with Yvonne Serville and Raymond Jacquot (the volumes were published between 1954 and 1956). He soon became director of second-year studies, based on diets for the sick. With the creation of the Association of French-Speaking Dieticians (Association des Diététiciennes de Langue Française) in 1954, in an issue of *Diététique et nutrition*, a journal devoted to this subject, Trémolières made no hesitation in weighing the diets of hospital patients against those of healthy individuals, claiming that, although the former was essential, the latter was a far more controversial topic. It was, in his opinion, “delusional to believe that eating behaviors can be changed” by means of nutritional tables “without at the same time changing an entire psychological and socio-economic context” (8).

For Trémolières, spreading a certain type of nutritional information was also the opportunity to establish solid foundations for the profession of nutritionist. It was for this reason that, in addition to its scientific work, the French-Speaking Society of Nutrition and Dietetics [*Société de Nutrition et de Diététique de Langue Française*, today known as the *Société Française de Nutrition* (9)], a learned society set up by Trémolières and Professor Bour in 1963, also organized events aimed at the general public, manufacturers, and public authorities. Henry Bour, professor of medicine and senior registrar at the Hôtel-Dieu hospital in Paris, was appointed president of the French-Speaking Society of Nutrition and Dietetics, and responsibility for the *Cahiers de nutrition et de diététique* (10), the society’s official publication, fell to Trémolières. The *Cahiers* were first published in 1966 and were widely supported by an agro-food industry trade union presided over by Edmond Desportes de Linières. The *Cahiers* are still published today and give a large amount of space to practical problems related to current affairs, industry, and public policies. In addition to the *Cahiers*, every year Trémolières organized a symposium with the French-Speaking Society of Nutrition and Dietetics in the Luxembourg Palace in Paris, demonstrating the importance of nutrition in mediating relations between industry, politics, and public health. Trémolières also created in 1974 with Bour the French Institute For Nutrition (transformed into the *Fond Français pour l’Alimentation et la Santé* (11), still active today), to improve the dialog between academic scientists and industry. His untimely death 30 July 1976, at the age of 62, occurred just as he was reaching the height of his scientific and public acclaim. During the last years of his life, Trémolières’s role as a nutritionist had received wide media coverage. The few English articles he wrote mainly indicated his views on the development of French nutrition and the implementation of dietetics in hospitals (12, 13) or on the social and philosophical aspect of food behavior and nutritional problems (14, 15). Rather than as an expert, Trémolières would have liked to be remembered for his discussions on the meaning of nutrition in contemporary society, as seen in his final books *Diététique et art de vivre* (Dietetics and the Art of Living), with a print run of >100,000 copies, and *Partager le pain* (Sharing Bread).

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Jean Trémolières
References
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